

SEP 16 2003

TECH CENTER 10



1600

RAW SEQUENCE LISTING

DATE: 09/12/2003

PATENT APPLICATION: US/09/942,583A

TIME: 13:44:28

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw

5 <110> APPLICANT: Robinson, Andrew
6 Gorringer, Andrew
7 Hudson, Michael
8 Bracegirdle, Phillipa
9 Kroll, John
10 Cartwright, Keith
11 Webb, Steven
12 Langford, Paul
13 Reddin, Karen
14 O'Dwyer, Cliona
16 <120> TITLE OF INVENTION: Neisserial Vaccine Compositions and Methods
18 <130> FILE REFERENCE: 1581.0840001
20 <140> CURRENT APPLICATION NUMBER: US 09/942,583A
21 <141> CURRENT FILING DATE: 2001-08-31
23 <150> PRIOR APPLICATION NUMBER: PCT/GB00/00624
24 <151> PRIOR FILING DATE: 2000-02-22
26 <160> NUMBER OF SEQ ID NOS: 16
28 <170> SOFTWARE: PatentIn version 3.0
31 <210> SEQ ID NO: 1
32 <211> LENGTH: 19
33 <212> TYPE: DNA
34 <213> ORGANISM: Unknown
36 <220> FEATURE:
37 <223> OTHER INFORMATION: PCR primer
39 <400> SEQUENCE: 1
40 gcagtcctctc gagctcaag 19
43 <210> SEQ ID NO: 2
44 <211> LENGTH: 19
45 <212> TYPE: DNA
46 <213> ORGANISM: Unknown
48 <220> FEATURE:
49 <223> OTHER INFORMATION: PCR Primer
51 <400> SEQUENCE: 2
52 cctctccact gacagaaaa 19
55 <210> SEQ ID NO: 3
56 <211> LENGTH: 17
57 <212> TYPE: DNA
58 <213> ORGANISM: Unknown
60 <220> FEATURE:
61 <223> OTHER INFORMATION: PCR Primer
63 <400> SEQUENCE: 3
64 gtaaaacgac ggccagt 17
67 <210> SEQ ID NO: 4

ENTERED

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003

TIME: 13:44:28

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw

```

68 <211> LENGTH: 17
69 <212> TYPE: DNA
70 <213> ORGANISM: Unknown
72 <220> FEATURE:
73 <223> OTHER INFORMATION: PCR Primer
75 <400> SEQUENCE: 4
76 aacagctatg gaccatg 17
79 <210> SEQ ID NO: 5
80 <211> LENGTH: 19
81 <212> TYPE: DNA
82 <213> ORGANISM: Unknown
84 <220> FEATURE:
85 <223> OTHER INFORMATION: Sequencing Primer
87 <400> SEQUENCE: 5
88 gcagtctctc gagctcaag 19
91 <210> SEQ ID NO: 6
92 <211> LENGTH: 22
93 <212> TYPE: DNA
94 <213> ORGANISM: Unknown
96 <220> FEATURE:
97 <223> OTHER INFORMATION: Sequencing Primer
99 <400> SEQUENCE: 6
100 cgcttttacac tttatgcttc cg 22
103 <210> SEQ ID NO: 7
104 <211> LENGTH: 17
105 <212> TYPE: DNA
106 <213> ORGANISM: Unknown
108 <220> FEATURE:
109 <223> OTHER INFORMATION: Sequencing Primer
111 <400> SEQUENCE: 7
112 gtaaaacgac ggccagt 17
115 <210> SEQ ID NO: 8
116 <211> LENGTH: 17
117 <212> TYPE: DNA
118 <213> ORGANISM: Unknown
120 <220> FEATURE:
121 <223> OTHER INFORMATION: Sequencing Primer
123 <400> SEQUENCE: 8
124 aacagctatg gaccatg 17
127 <210> SEQ ID NO: 9
128 <211> LENGTH: 76
129 <212> TYPE: DNA
130 <213> ORGANISM: Unknown
132 <220> FEATURE:
133 <223> OTHER INFORMATION: Linker Sequence
135 <220> FEATURE:
136 <221> NAME/KEY: misc_feature
137 <222> LOCATION: (1)..(5)
138 <223> OTHER INFORMATION: Bam HI restriction site

```

RAW SEQUENCE LISTING

DATE: 09/12/2003

PATENT APPLICATION: US/09/942,583A

TIME: 13:44:28

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw

```

140 <220> FEATURE:
141 <221> NAME/KEY: misc_feature
142 <222> LOCATION: (75)..(76)
143 <223> OTHER INFORMATION: XbaI restriction site
145 <220> FEATURE:
146 <221> NAME/KEY: misc_feature
147 <222> LOCATION: (8)..(15)
148 <223> OTHER INFORMATION: NotI restriction site
150 <220> FEATURE:
151 <221> NAME/KEY: misc_feature
152 <222> LOCATION: (16)..(21)
153 <223> OTHER INFORMATION: SnaBI restriction site
155 <220> FEATURE:
156 <221> NAME/KEY: misc_feature
157 <222> LOCATION: (22)..(33)
158 <223> OTHER INFORMATION: NcoI restriction site
160 <220> FEATURE:
161 <221> NAME/KEY: misc_feature
162 <222> LOCATION: (34)..(39)
163 <223> OTHER INFORMATION: SmaI restriction site
165 <220> FEATURE:
166 <221> NAME/KEY: misc_feature
167 <222> LOCATION: (46)..(51)
168 <223> OTHER INFORMATION: PstI restriction site
170 <220> FEATURE:
171 <221> NAME/KEY: misc_feature
172 <222> LOCATION: (52)..(75)
173 <223> OTHER INFORMATION: neisserial uptake sequence
175 <400> SEQUENCE: 9
176 gatcccggcg gccgctacgt accatgggag ctgcccgggg tccagctgca ggccgtctga 60
178 atcatttcag acggct 76
181 <210> SEQ ID NO: 10
182 <211> LENGTH: 77
183 <212> TYPE: DNA
184 <213> ORGANISM: Unknown
186 <220> FEATURE:
187 <223> OTHER INFORMATION: Complimentary Sequence to SEQ ID NO: 9
189 <400> SEQUENCE: 10
190 ctagagccgt ctgaaatgat tcagacggcc tgcagctgga ccccgggcag ctcccatggt 60
192 acgtagcggc cgccggg 77
195 <210> SEQ ID NO: 11
196 <211> LENGTH: 20
197 <212> TYPE: DNA
198 <213> ORGANISM: Unknown
200 <220> FEATURE:
201 <223> OTHER INFORMATION: Artificial sequence, alternative 5' end
203 <400> SEQUENCE: 11
204 tttttggaga attgaccatg 20
207 <210> SEQ ID NO: 12

```

RAW SEQUENCE LISTING

DATE: 09/12/2003

PATENT APPLICATION: US/09/942,583A

TIME: 13:44:28

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw

```

208 <211> LENGTH: 591
209 <212> TYPE: DNA
210 <213> ORGANISM: Unknown
212 <220> FEATURE:
213 <223> OTHER INFORMATION: Artificial Sequence Comprising Expression Cassette of nspA
215 <400> SEQUENCE: 12
216 tgaccataaa ggaaccaaaa tatgaaaaaa gcacttgcca cactgattgc cctcgctctc      60
218 ccggccgccc cactggcgga aggcgcatcc ttacgtcca agccgatgcc gcacacgcaa      120
220 aagcctcaag ctcttttaggt tctgccaag gcttcagccc gcgcatctcc gcaggctacc      180
222 gcatcaacga cctccgcttc gccgtcgatt acacgcgcta caaaaactat aaagcccat      240
224 ccaccgattt caaactttac agcatcggcg cgcccgccat ttacgacttc gacaccaat      300
226 cgcccgtcaa accgtatctc ggcgcgcgct tgagcctcaa ccgcgcctcc gtcgacttgg      360
228 gcggcagcga cagcttcagc caaacctcca tcggcctcgg cgtattgacg ggcgtaagct      420
230 atgccgttac cccgaatgtc gatttggatg ccggctaccg ctacaactac atcggcaaag      480
232 tcaacactgt caaaaacgtc cgttccggcg aactgtccgt cggcgtgcgc gtcaaattct      540
234 gatatgcgcc ttattctgca aaccgccgag ccttcggcgg ttttgttttc t          591
238 <210> SEQ ID NO: 13
239 <211> LENGTH: 138
240 <212> TYPE: DNA
241 <213> ORGANISM: Unknown
243 <220> FEATURE:
244 <223> OTHER INFORMATION: pMIDG100 partial sequence
246 <400> SEQUENCE: 13
247 actagtaacc gagccgcct aatgagcggg cttttttttg cagtctctcg agctcaagct      60
249 tcgaattctg cagtcgacgg taccgcgggc ccgggatccg ctagcagttt taagattttt      120
251 ggagaattga ccatgagt                                138
254 <210> SEQ ID NO: 14
255 <211> LENGTH: 48
256 <212> TYPE: DNA
257 <213> ORGANISM: Unknown
259 <220> FEATURE:
260 <223> OTHER INFORMATION: pMIDG100 partial sequence
262 <400> SEQUENCE: 14
263 tagcattagt agccgcctaa tgagcgggct tttttttgca gttctaga      48
266 <210> SEQ ID NO: 15
267 <211> LENGTH: 68
268 <212> TYPE: DNA
269 <213> ORGANISM: Unknown
271 <220> FEATURE:
272 <223> OTHER INFORMATION: pMIDG201 partial sequence
274 <400> SEQUENCE: 15
275 actagtaacc gagccgcct aatgagcggg cttttttttg cagtctctcg agctcaagct      60
277 tcgaattc                                68
280 <210> SEQ ID NO: 16
281 <211> LENGTH: 83
282 <212> TYPE: DNA
283 <213> ORGANISM: Unknown
285 <220> FEATURE:
286 <223> OTHER INFORMATION: pMIDG201 partial sequence

```

RAW SEQUENCE LISTING

DATE: 09/12/2003

PATENT APPLICATION: US/09/942,583A

TIME: 13:44:28

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw

288 <400> SEQUENCE: 16

289 ggatcccggc ggccggctac gtaccatggg agctgcccg ggtccagctg caggctgtct 60

291 gaatcatttc agacggctct aga 83

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/942,583A

DATE: 09/12/2003

TIME: 13:44:29

Input Set : A:\substitute Seq_list 1581_0840001.txt

Output Set: N:\CRF4\09122003\I942583A.raw